

2015		
Unit ID	Description	Air Pollution Control Devices
P005	Tunnel Kiln #4 (E-9)	Baghouse
P006	Copper Calciner 1 (E-10)	2 Baghouses
P009	Rotary Calciner #4 (E-13-1)	TriMer Scrubber and baghouse
P010	Rotary Calciner #1 (E-14)	F-1 Scrubber, TriMer Scrubber, and baghouse
P018	Wyssmont Drier (E-22)	Baghouse
P024	Gen Cat Reaction Tanks (E-28)	Wet scrubber
P026	Double Cone Blenders B-1&2 (E-30)	Wet scrubber
		TriMer Scrubber when generating N
P028	Gen Cat Extruders (E-32)	Baghouse
P031	CER Color Blend, Crush, Mill (E-35)	Baghouse
P050	Misc. Tablet Mix Equipment	Baghouse
P051	J.H. Day Blenders (E-55)	Baghouse
P053	Nickel Tablet System (E-57)	2 Baghouses
P055	Zinc Tablet Mix (E-59)	Baghouse and a wet scrubber
P069	P-K Blender (E-76)	Baghouse
P070	CU/CR Strike Tanks (E-77)	Wet scrubber
P080	Rotary Calciner #5 (E-13)	TriMer Scrubber and baghouse
P086	Gen Cat P&S Dryers #2 & #3	Viron scrubber #1 & #2
P092	Rotary Calciner #6	Dust collector
		Dust collector
		Sly Scrubber
		Sly Scrubber

Monitoring Requirements	Monitoring Frequency	Enforceability	Reporting
VE checks	weekly	Fed & State	Semi-annual VE report
Baghouse pressure drop (1-5"WC)	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	Quarterly Deviation Report
Baghouse Pressure drop (0.3-4.5"WC)	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
Method 9 VE reading	quarterly	Fed & State	Quarterly Deviation Report
TriMer 1st Stage Pressure Drop (0-1.5"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 2nd Stage Pressure Drop (1-4"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (3-6"WC)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water pH (10-13)	once per shift	State only	Quarterly Deviation Report
Operating times for the capture and control sy	daily	State only	
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks	weekly	Fed & State	Semi-annual VE report
Method 9 VE reading	quarterly	Fed & State	Quarterly VE report
TriMer 1st Stage Pressure Drop (0-1.5"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 2nd Stage Pressure Drop (1-4"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (3-6"WC)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water pH (10-13)	once per shift	State only	Quarterly Deviation Report
Operating times for the capture and control sy	daily	State only	
Baghouse pressure drop (1-6"WC)	daily	Fed & State	Quarterly Deviation Report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	State only	Semi-annual VE report
TriMer scrubber water pH >9 for tanks 1, 2, 3	daily	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	daily	State only	Quarterly Deviation Report
TriMer 1st Stage Pressure Drop (0.2-3"WC)	daily	State only	Quarterly Deviation Report
TriMer 2nd Stage Pressure Drop (1-5" WC)	daily	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (1-6"WC)	daily	State only	Quarterly Deviation Report
Method 9 VE reading	quarterly	State only	Quarterly VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks	weekly	Fed & State	Semi-annual VE report
Scrubber pressure drop (>1"WC)	daily	Fed & State	Quarterly Deviation Report
Scrubber water flow rate (>25 gal/min)	daily	Fed & State	Quarterly Deviation Report
Operating times for the capture and control sy	daily	Fed & State	
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks	weekly	Fed & State	Semi-annual Deviation Report
TriMer 1st Stage Pressure Drop (0-0.6"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 2nd Stage Pressure Drop (1-3"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (3-5"WC)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water pH (10-12)	once per shift	State only	Quarterly Deviation Report
Operating times for the capture and control sy	daily	State only	
Scrubber pressure drop (>1"WC)	daily	Fed & State	Quarterly Deviation Report
Scrubber water flow rate (>2 gal/min)	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
Operating times for the capture and control sy	daily	Fed & State	
Scrubber liquor pH (6-11)	once per shift	Fed & State	Quarterly Deviation Report
<2" water WC	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
Flow > 2gpm	daily	Fed & State	Quarterly Deviation Report
Demister pressure drop <1" WC	daily	Fed & State	Quarterly Deviation Report

	January Operating Parameter	January Missing Record	February Operating Parameter	February Missing Record	March Operating Parameter	March Missing Record	April Operating Parameter
Monitoring/Recordkeeping Form							
Weekly Visual Emission Report							
Calciner Baghouse Reading Form							
Operating Record							
Daily Emission Units Report			2				
Operating Record							
Tri-Mer Scrubber Reading Form			4				
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form			56		17		34
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Operating Record							
Operating Record							
Weekly Visual Emission Report							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form	31		7		13		26
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Operating Record							
Wyssmont Drier DC Reading Form							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Weekly Visual Emission Report							
Operating Record							
NH3 and HNO3 Scrubber Reading Form							
NH3 and HNO3 Scrubber Reading Form							
Operating Record							
Operating Record							
Weekly Visual Emission Report							
Tri-Mer Scrubber Reading Form							21
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form			1				25
Tri-Mer Scrubber Reading Form							
Tri-Mer Scrubber Reading Form							
Operating Record							
Daily Emission Units Report							
Daily Emission Units Report							
Operating Record							
Operating Record							
Daily Emission Units Report							1
Daily Emission Units Report							
Daily Emission Units Report							
Daily Emission Units Report							
Daily Emission Units Report							

		Sly Scrubber
		SCR and SCR Dust Collector, when
		SCR and SCR Dust Collector, when
		SCR
P094	Spin Flash Dryer (E-100)	none
P095	Copper Calciner #2 (E-101)	3 baghouses
P098	Bldg 25 East Tableting	baghouse
P099	PK Blender #2 (E-103)	baghouse and a wet scrubber
P100	Tunnel Kiln #2 (E-8)	baghouse
P101	Tunnel Kiln #3 (E-8)	baghouse
P102	Rotary Calciner #2	F-1 Scrubber, TriMer Scrubber, SCR unit and baghouse
P103	Rotary Calciner #3	F-1 Scrubber, TriMer Scrubber, SCR unit and baghouse
P104	Iron Catalyst Mixing (E-104)	Baghouse
P105	Gravity Bed Separator	Dust collector
P106	National Dryer	Baghouse
P129	LIB Plant	Capture System Dust collectors and afterfilters
P130	#6 P&S Dryer	Sly Scrubber Sly Scrubber Sly Scrubber
P131	Copper Tablet Precursor Process	Dust collector
		Bin vent
P132	Powder Room	Dust collector (lines 1-3) Fabric filter (50 lb. bag transfer)
	2016 DEVIATIONS	
	Breakdown of Type	1st Quarter
	Operating outside permit parameters	149
	Operations failure to complete forms	0
	Data collection failure do to inaccurate forms	0
	Visible emissions checks	0
	Total	149

VE checks	daily	Fed & State	Quarterly Deviation Report
Dust Collector >1" WC	daily	Fed & State	Quarterly Deviation Report
SCR bed exhaust Temp. >650 degrees F	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
Emission factors for NOx emitting materials	daily	Fed & State	Quarterly Deviation Report
Record of NOx emitting materials	daily	Fed & State	Quarterly Deviation Report
VE checks	weekly	Fed & State	Semi-annual VE report
Baghouse pressure drop (1-6"WC) - 3 baghouse	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
Baghouse pressure drop (3-5"WC)	daily	State only	Quarterly Deviation Report
Scrubber pressure drop (>2"WC)	daily	State only	Quarterly Deviation Report
Scrubber water flow rate (as recommended by	daily	State only	Quarterly Deviation Report
Operating record			
VE checks	weekly	Fed & State	Semi-annual VE report
VE checks	weekly	Fed & State	Semi-annual VE report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks (baghouse)	daily	Fed & State	Semi-annual VE report
Method 9 VE reading	quarterly	Fed & State	Semi-annual VE report
TriMer 2nd Stage Pressure Drop (1-3"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (3-5"WC)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water pH (10-12)	once per shift	State only	Quarterly Deviation Report
Operating times for the capture and control sy	daily	State only	
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE checks (baghouse)	daily	Fed & State	Semi-annual VE report
Method 9 VE reading	quarterly	Fed & State	Quarterly VE report
TriMer 2nd Stage Pressure Drop (1-3"WC)	once per shift	State only	Quarterly Deviation Report
TriMer 3rd Stage Pressure Drop (3-5"WC)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water flow rate (>50 gal/min)	once per shift	State only	Quarterly Deviation Report
TriMer scrubber water pH (10-12)	once per shift	State only	Quarterly Deviation Report
Operating times for the capture and control sy	daily	State only	
Baghouse pressure drop (3-5"WC)	daily	Fed & State	Quarterly Deviation Report
Baghouse pressure drop (1-4"WC)	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Semi-annual VE report
Baghouse pressure drop (1-4"WC)	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Semi-annual VE report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
VE Capture	daily	Fed & State	Semi-annual VE report
Pressure drop	daily visual / continuous	Fed & State	Quarterly Deviation Report
VE Checks	weekly	Fed & State	Semi-annual VE report
Flow > 2gpm	daily	Fed & State	Quarterly Deviation Report
Demister pressure drop <1" WC	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
Baghouse pressure drop >1" WC	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
Bin vent pressure drop >1"WC	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
Type of fuel burned other than NG	daily	Fed & State	30 Day report
Rolling twelve month record of HAP (Chromium)	monthly	Fed & State	
Baghouse pressure drop >1" WC	daily	Fed & State	Quarterly Deviation Report
Filter pressure drop >1" WC	daily	Fed & State	Quarterly Deviation Report
VE checks	daily	Fed & State	Quarterly Deviation Report
2nd Quarter	3rd Quarter	4th Quarter	
234			
0			
0			
0			
234			

[illegible]

	BREAKDOWN OF OPERATING OUTSIDE PARAMETERS DEVIATIONS	
	TriMer	143
	Others	6
	% Trimer	97

233			
1			
99.6			

Source	Date Start	Time Start	Date End	Time End	Parameter	Deviation
P080	4/2/2016	1900	4/3/2016	100	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/2/2016	1900	4/3/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	4/3/2016	1600	4/8/2016	700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	4/4/2016	1300	4/6/2016	0	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/4/2016	2000	4/5/2016	500	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/4/2016	2000	4/5/2016	500	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P010	4/6/2016	1000	4/7/2016	1900	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/7/2016	1900	4/8/2016	900	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/7/2016	1900	4/8/2016	900	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/8/2016	1900	4/9/2016	300	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/8/2016	1900	4/9/2016	300	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	4/8/2016	1900	4/13/2016	1100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/9/2016	900	4/10/2016	1900	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	4/11/2016	1700	4/8/2016	2000	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/13/2016	1100	4/14/2016	1500	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/13/2016	1100	4/14/2016	1500	TriMer Stage 3 pressure drop	Pressure drop <3 "
P086	4/16/2016	100	4/16/2016	900	pH between 6-11	pH higher than 11
P010	4/16/2016	100	4/18/2016	1600	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	4/16/2016	1700	4/17/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	4/19/2016	1700	4/20/2016	1400	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	4/21/2016	1700	4/22/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	4/23/2016	1300	4/23/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/23/2016	1300	4/24/2016	100	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/23/2016	1300	4/26/2016	1400	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/24/2016	1100	4/25/2016	1300	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/26/2016	0	4/26/2016	1400	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P009	4/27/2016	1100	5/1/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	4/27/2016	1100	4/27/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/27/2016	1100	4/27/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P080	4/27/2016	1700	4/28/2016	100	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/28/2016	900	4/28/2016	1630	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P080	4/29/2016	1100	4/29/2016	1600	TriMer Stage 1 pressure drop	Pressure drop >0.6 "
P010	5/2/2016	0	5/2/2016	1045	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	5/4/2016	730	5/4/2016	1600	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	5/7/2016	2100	5/8/2016	730	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	5/7/2016	2100	5/9/2016	800	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	5/16/2016	1500	5/23/2016	200	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	5/30/2016	2000	6/9/2016	400	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/2/2016	1100	6/3/2016	1900	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/4/2016	800	6/8/2016	1200	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/9/2016	1100	6/9/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/9/2016	1100	6/9/2016	1700	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/10/2016	400	6/10/2016	1130	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/10/2016	400	6/10/2016	1130	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/16/2016	100	6/17/2016	800	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/16/2016	100	6/17/2016	800	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/18/2016	1900	6/20/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/18/2016	1900	6/18/2019	2300	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/20/2016	100	6/20/2016	1100	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/20/2016	1500	6/21/2016	1300	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/23/2016	0	6/23/2016	1000	TriMer Stage 3 pressure drop	Pressure drop <3 "
P009	6/23/2016	0	6/25/2016	1930	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/23/2016	2000	6/25/2016	1930	TriMer Stage 3 pressure drop	Pressure drop <3 "
P010	6/23/2016	2000	6/30/2016	1500	TriMer Stage 3 pressure drop	Pressure drop <3 "

Action Taken	# Deviations	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	5	Non TriMer
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	4	
Shutdown feed	2	
Shutdown feed	2	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	15	
Shutdown feed	5	
Shutdown feed	4	
Shutdown feed	5	
Shutdown feed	5	
Adjusted pH	1	
Shutdown feed	9	
Shutdown feed	1	
Shutdown feed	3	
Shutdown feed	4	
Shutdown feed	2	
Shutdown feed	2	
Shutdown feed	9	
Shutdown feed	4	
Shutdown feed	2	
Shutdown feed	12	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	2	
Shutdown feed	2	
Shutdown feed	6	
Shutdown feed	19	
Shutdown feed	26	
Shutdown feed	4	
Shutdown feed	12	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	5	
Shutdown feed	5	
Shutdown feed	5	
Shutdown feed	1	
Shutdown feed	1	
Shutdown feed	2	
Shutdown feed	1	
Shutdown feed	9	
Shutdown feed	7	
Shutdown feed	15	

Source	Date Start	Time Start	Date End	Time End	Parameter	Deviation	Action Taken
P010	7/1/2016	300	7/4/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P009	7/1/2016	300	7/7/2016	900	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P010	7/6/2016	500	7/7/2016	900	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P010	7/22/2016	1300	7/25/2016	100	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P009	7/22/2016	1300	7/22/2016	2200	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P009	7/28/2016	1600	x	x	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed
P010	7/29/2016	1700	8/1/2016	1600	TriMer Stage 3 pressure drop	Pressure drop <3 "	Shutdown feed

# Deviations		
10		
20		
5		
8		
1		
x	31	8/7/2016
10		